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Wolff et al.

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(54) **LEAD-FREE AND PREFERABLY
ARSENIC-FREE LANTHANUM HEAVY
FLINT GLASS**

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(58) **Field of Classification Search** **501/78,**
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See application file for complete search history.

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(57) **ABSTRACT**

The lead-free and arsenic-free optical glass has a refractive index n_d of $1.84 \leq n_d \leq 1.96$ and an Abbé number v_d of $27 \leq v_d \leq 36$, with good chemical resistance, excellent crystallization resistance and the following composition (in % by weight based on oxide): SiO₂, 1 to 8, B₂O₃, 13 to 19.5, La₂O₃, 34 to 50; MgO, 0 to 6, CaO, 0 to 6, BaO, 0 to 6, ZnO, 0 to 9 with Σ MO, 1 to 10; and TiO₂, 4 to 15, ZrO₂, 0 to 11, Nb₂O₅, 6 to 14.5. In addition, the glass according to the invention, as well as having a maximum alkali metal oxide content of 10% by weight, may also contain standard refining agents other than arsenic. The glass according to the invention is used in imaging, projection, telecommunications, optical communication and/or laser technology.

14 Claims, No Drawings